ABSTRACT OF THE DISCLOSURE

A method factors an ambiguous finite state transducer (FST) into two finite state transducers. The first FST is functional (i.e., unambiguous). The second FST retains the ambiguity of the original FST but is fail-safe (i.e., no failing paths) when applied to the output of the first FST. That is, the application of the second FST to an input string never leads to a state that does not provide a transition for the next symbol in the input. Subsequently, the first FST can be factorized into a left-sequential FST and a right-sequential FST that jointly represent a bi-machine.